

Speaking Anxiety among TVET Undergraduates and Its Implication on Graduate Employability

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Abstract: Speaking skill is an important predictor in graduate employability. Many job seekers suffer from speaking anxiety and this has affected their job employment opportunities. The focus of this research is to examine the TVET undergraduates' speech anxiety level and determine what makes them apprehensive when speaking. The study also finds out the anxiety level differences between male and female TVET learners. The 313 research participants who answered McCroskey's Personal Report of Public Speaking Anxiety (PRPSA) questionnaire were undergraduates from a public technical university. The findings revealed that the learners had moderate levels of speech anxiety ($M=115.7$) and t-test results indicated that the mean scores for speaking anxiety levels of male and female learners did not differ in a way that was statistically significant though TVET female learners ($M=113.30$, $SD=14.309$) experienced slightly higher levels of speaking anxiety compared to their male counterparts ($M=111.58$, $SD=15.996$). The idea of giving a speech sent fears to the learners while losing concentration during speech heightened the learners' speech anxiety level. Higher learning institutions could include public speaking trainings in their TVET syllabi. Additional soft skills such as public speaking helps ensure TVET graduates become industry priority in the employment market.

Keywords: Speech Anxiety, Public Speaking, Soft Skill, TVET, Graduate Employability

1. Introduction

The Malaysian Investment Authority (MIDA) in 2023 issued a statement highlighting that it is imperative that we establish a Technical and Vocational Education and Training (TVET) institution of world class standing if Malaysia is to become a hub for TVET in Asia. This is more so as TVET is acknowledged as a crucial avenue in the 12th Malaysia Plan. MIDA stressed that for TVET in Malaysia to optimize job prospects and foster sustained economic growth, the curriculum must be industry-driven. This so-called superior industry-based curriculum requires the skills to deal with the Fourth Industrial Revolution (IR 4.0). It is notable that IR 4.0 has sent a shockwave into every part of the world and unexpected changes are taking place in all job sectors. Those entering the labour force will have to embrace advancing technologies such as artificial intelligence (AI), robotics, supercomputers, cloud manufacturing, augmented reality, Big Data and the Internet of Things (IoT). The job market now is rapidly shaped by robust technological impacts, so much so that to succeed in IR 4.0, job applicants must acquire new skills or risk redundancy or unemployment (Mohd Kamaruzaman, 2019). In light of this, Ahmad et al. (2019) believed that it is paramount that learners in TVET institutions acquire both technical and soft skills to remain employed in future job settings. Echoing the same

idea, Ismail et al. (2020) agreed that the current situation demands new employees to not only possess knowledge and skills in automation, digital and information technology but to be armed with the necessary soft skills to manage and utilize smart systems.

Employability skills, also known as job readiness skills, help students develop into a skilled, productive workforce once their education is over (Mohamad Zuber et al., 2020). Yong and Ling (2023) stated that employability entails both hard and soft skills. Soft skills are innate qualities that enhance an individual's communication and job performance while hard skills are the technical requirements of a profession (Al Asefer & Abidin, 2021). With changes and challenges happening in work settings due to the rise of IR 4.0, it is the obligation of higher education institutions to deliver soft skills while conveying knowledge. The Ministry of Higher Education Malaysia has urged all TVET and higher education establishments to provide an extensive education system to train the students in IR 4.0 skills, namely soft skills, thereby producing an excellent technical workforce (Nurul Afizah et al., 2020). The Graduate Employability Blueprint (2012–2017) outlined the components of graduate employability and set a goal of having at least 75% of graduates find work following graduation (Abdul Majid, 2019). The Institute of Labour Market Information and Analysis (ILMIA) in 2018 reported that local TVET graduates lacked employability skills with one such skill pertaining to communication. The International Labour Organization (ILO) projects expressed that by 2030, 395 million more individuals will enter the labour market, making Asia home to two-thirds of the world's workforce. As such, it is crucial that Malaysia prepares a competitive and resilient TVET workforce equipped with the right employability skills to meet the current industrial needs.

According to McGunagle and Zizka (2020), the term 'employability skills' is interchangeable with a few other terms such as 21st-century skills, soft skills and cross-disciplinary skills. Mahmud and Wong (2022) used the term '21st-century skills' to refer to in-demand and universally applicable skills. Nurul Afizah et al. (2020) chose the term 'non-technical skills' and stated that communication skills should be exposed to TVET students. The 2020 Quacquarelli Symonds (QS) Employer Insights Report affirmed that 13,000 employers worldwide had identified communication as one of the top four essential skills for students when preparing for the workforce. Mulyono, Adistana and Wiyono in A. Mustofa et al. (2023) concurred that communication and collaboration deemed as the 21st-century skills are essential for many future jobs. According to the Workforce-Skills Preparedness Report (PayScale, 2016), college graduates need to demonstrate strong communication skills, express ideas clearly, and be proficient in public speaking in order to be recruited for jobs. Sholikhi (2022) highlighted that it is important to master English speaking skills as any weaknesses in communication will either limit students' future employment opportunities or cause them to perform poorly at work. Naser and Isa (2021) contended that employers were reluctant to employ local graduates as they lacked communication skills and they further reiterated that it is imperative for graduates to especially master English speaking skills to compete in the present labour market. Chollet et al. (2015) agreed that strong leadership, professional advancement, and personal development are all advantages of having effective communication skills. Chan and Selvam (2016) propounded that the industry expects college graduates to have solid abilities in communication. Nooriah and Zakiah (2017) attributed the high number of unemployed graduates in public universities to poor communication skills. Shyam and Joy (2016) stressed that in the real world, the ability to speak in public is expected of individuals in order to improve their chances of employment along with additional prospects. When people progress in their careers, they are bound to speak and voice out their thoughts at meetings, forums, and business encounters, which is why having strong communication skills is so important (Raja, 2017). Additionally, Arnold (2018) postulated that in the workplace, communication skills, particularly public speaking abilities, are highly valued and those with high public speaking anxiety level may experience adverse difficulty in career advancements.

It is essential to note the six communication skill qualities that engineering graduates must have (Mohd Kamaruzaman et al., 2020). The aforementioned qualities include the capacity to communicate clearly in writing, interact with individuals of diverse backgrounds, give presentations, articulate one's own ideas, listen intently, and provide constructive criticism. Speaking is deemed crucial in developing interpersonal communication. Therefore, with concerns of TVET undergraduates experiencing communication anxiety, the present study examines UTeM technical learners' speech anxiety level during speaking activities. This study also investigates whether male and female TVET learners differ in their speech anxiety levels. The study also explores the causes for speech anxiety among these learners. It is anticipated that the results of this investigation will offer perceptions into the ways higher education institutions can help instil confidence in our TVET learners to speak and present ideas, making them successful professionals. TVET learners should understand that to achieve set goals, minimal communication anxiety level is aspired at workplaces. In light

of this, TVET undergraduates could be given public speaking courses before they finish their studies. Regular speaking practices in front of a crowd should be conducted so that our TVET undergraduates excel in communicating effectively. Therefore, this study intends to address the subsequent research questions.

- a. To what extent do TVET undergraduates suffer from speaking anxiety?
- b. What are the causes of speaking anxiety among TVET undergraduates?
- c. Is there a difference in the level of speaking anxiety between male and female TVET undergraduates?

2. Literature Review

Speaking is an interactive activity where meaning is conveyed through production, reception and information processing (Bailey, 2005). Speaking as a skill has two main functions namely transactional and interpersonal which is important for one to master in order to carry out a conversation (Aziz & Kashinathan, 2021).

2.1 Speaking Anxiety

Agreeing on the necessity of acquiring speaking skills among technical students, Azmi and Osman (2024) emphasized that one major obstacle that TVET learners faced was speaking anxiety which affected their achievement. Pohan and Kusumawardany (2023) asserted that speaking anxiety is one of the challenges that students frequently experience when speaking in a foreign language. Cagatay (2015) found that some individuals experienced fear and felt uneasy when they had to speak in front of a group of people. Mandela (2021) in his study discovered that speaking anxiety reduced engagement, caused hesitations and limited participation which eventually affected students' academic performance. Karnine et al. (2022) argued that students who face speaking anxiety would often keep silent for fear of being deemed a failure in the classroom. Bordios et al. (2022) reported that speaking anxiety among college students resulted in low engagement in classroom activities and stressed that students experienced high anxiety in public speaking. Dansieh (2021) discovered that most students understood that public speaking was a crucial and indispensable communication skill that was considered necessary in both their academic pursuits and potential professional careers, but somehow, they had a severe fear of speaking in front of any kind of crowd. In another study conducted in a university, Suriya et al. (2022) found that MCU bachelor students in the faculty of humanity, were experiencing high speech anxiety level. The researchers maintained that the students' anxiety arising from being self-conscious caused them to feel uneasy about speaking English. Results of a study by Oktavia and Syahrul (2021) indicated that the students' anxiety influenced their speaking performance. Oli and Ramesh (2022) acknowledged that English language speaking anxiety is a major difficulty experienced by learners which hinders their oral performance. Rajitha and Alamelu (2020) in their study involving Art and Science final year undergraduates, observed students' anxiety levels were very high when speaking in English. Interestingly, Bordios et al. (2024) pointed out that even students with strong English language proficiency experienced significant speaking anxiety.

Various factors have been identified as the causes of speaking anxiety. Shen and Chiu (2019) categorised the causal factors into psychological, linguistic and environmental. Ramli et al. (2024) claimed that communication anxiety is due to internal and external factors. In their research, Martiningsih et al. (2024) explained that both linguistic and non-linguistic factors trigger public speaking anxiety. Research conducted by Razawi, Zulkornain and Razlan (2019) stated that among the factors which caused anxiety for students during their oral presentations were related to competency in language, disposition, readiness and interest of the audience. Factors such as lack of preparation, fear of committing mistakes, mispronunciations and being laughed at were found to be the sources of speaking anxiety among college students (Fauzi et al., 2021). Similar results were discovered by Aini and Lubis (2023), which include, among others, students being afraid to make mistakes, having low self-esteem, and often worrying about a given speaking task.

2.2 Graduate Employability

Employability, according to Finch et al. (2016), is the set of abilities, knowledge, and personal attributes that improve a person's chance of pursuing and being successful in their chosen field which also

benefit the workers, the community, and the economy. The researchers also argued personal work features, such as interpersonal and communication skills as important attributes that a graduate must possess in order to enhance their competitive advantage in the labour market. Behle (2020) viewed employability as one's ability to secure, maintain and advance in graduate employment. The researchers further stressed that workers possessing employability skills will be the key to the successful growth of knowledge-based economies. Dali et al. (2023) interpreted employability as an individual's capability to secure a job, improve one's productivity and increase earning potentials in the employment.

Graduate employability is not only confined to hard skills as required by the labour market. It has been discovered that by developing and acquiring both hard and soft skills, graduates will achieve a positional advantage (Clarke, 2017). Earlier in their study, Stewart et al. (2016) claimed that employers found soft skills to be crucial for business success and that relying on the workers' technical skills alone were inadequate to achieve the goals of the organization. Calvo and Garcia (2020) opined that developing employability skills was crucial to enhance productivity and work value. Al Asefer and Abidin (2021) held the view that soft skills have been a strong predictor in enhancing employability among graduates in today's challenging and robust global work setting. In relation to this, Mainga et al. (2022) has specified graduate employability to include soft skills such as interpersonal, teamwork, critical thinking, and communication skills in order to secure a job and progress in one's chosen career. Omar et al. (2023) acknowledged that the modern workforce requires employability skills like communication, negotiation, teamwork, leadership, and critical and creative thinking. It is worth noting that Malaysian academics adopted the stance that it is critical to improve graduate employability skills (Khan & Chong, 2024).

It cannot be denied that graduate employability entails the need for a job aspirant to speak effectively, and many studies concur that speaking ability is an integral part of employability skills. Suratman et al. (2017) defined communication skill or competence as the capability to comprehend language and express ideas effectively in authentic situations. Chaka (2020) asserted that the IR 4.0 requires workers to possess soft skill competencies, such as communication skills. The importance of communication ability as part of job-seeking skills is further supported by Duvvuri et al. (2024). Wu et al. (2023) in their study discovered that the employability of engineering students is significantly influenced by their communication skills. Sunita et al. (2022) asserted good oral communication skills will build individuals' self-confidence and increase their employment opportunities. In sum, all studies suggest that communication skills, particularly speaking skills, have an essential role in acquiring employability.

3. Research Method

3.1 Design

The current research employed a quantitative descriptive design using questionnaires. This study describes the level of speech anxiety of UTeM TVET learners, what causes the anxiety and if male and female TVET students' anxiety levels differ from one another. It is best to have a descriptive research design as it helps the researchers elicit more information, provide understanding and answer the research questions.

3.2 Sampling

The respondents of this study were TVET learners pursuing engineering and information technology bachelor degree programmes at Universiti Teknikal Malaysia Melaka (UTeM). As the research questions are on speaking anxiety, the target respondents were learners who were enrolled in the English for Professional Interaction (EPI) course. EPI is a 2-credit compulsory English course taken by third year undergraduates and the subject content focuses mainly on speaking skills. It is more of a purposive sampling as only EPI students were selected as the participants in this study.

Out of the 802 students registered for EPI, 313 students responded to the questionnaire, coming from the faculties of manufacturing, electronics and computer engineering, electrical and electronics engineering technology, manufacturing technology and information and communication technology.

3.3 Research Instrument

The PRPSA questionnaire, or Personal Report of Public Speaking Anxiety, is used to gather data in this study. This 34-item PRPSA questionnaire was first created by McCroskey in 1970. These items assess the fear of public speaking by focusing on elements of attitude, psychology, and feelings. The PRPSA is apt for use as it is more direct in addressing public speaking anxiety in educational settings than other scales (Garcia-Monge, 2023).

A 5-item Likert scale, with 1 indicating "strongly disagree" and 5 indicating "strongly agree," is used to score each item. Twelve items feature positive phrases, such as "I enjoy preparing for a speech," whereas twenty-two items reflect negative opinions, such as "I feel anxious while waiting to give my speech." The positively constructed PRPSA elements were reversed in the data analysis, resulting in high scores on the scale that consistently indicated a greater fear of public speaking. According to Mortberg et al. (2018), every item in PRPSA has good test-retest reliability (0.84) and excellent internal consistency (0.94).

PRPSA scores are used to categorize the severity of anxiety related to public speaking. A score of 131 or above reveals high anxiety, a score between 98 and 131 explains moderate anxiety, and a score below 98 shows low anxiety.

There are two sections in the questionnaire. Participants must indicate their gender and study programme in Section A, while Section B's items evaluate the participant's attitude, psychology, and emotions related to public speaking. Table 1 lists the number of positive and negative expressions in PRPSA.

Table 1

Types of PRPSA Items

	Item No.	Total Items
Positive expressions	4,6,7,8,11,12	12
	15,16,17,18	
	24,26	
Negative expressions	1,2,3,5,9,10	22
	13,14,19,20	
	21,22,23,25	
	27,28,29,30	
	31,32,33,34	
Total		34

3.4 Procedure

The participants were given the questionnaires during their EPI class time. It was explained to them the reason they needed to respond to the 34 PRPSA statements and the importance of responding to the survey impartially. The researcher assured the participants that their responses would remain confidential. The surveys were filled out anonymously, with no personal information included except for gender and faculty code. This is to protect privacy and increase the likelihood that responses will be truthful.

3.5 Data Analysis

SPSS version 21.0 was used to analyze the participants' responses. Utilizing both descriptive and inferential statistics, the generated data was interpreted. The participants' mean scores were used to explain their level of public speaking anxiety, and a t-test was used to see if the speech anxiety levels of the male and female participants differed significantly.

4. Results and Discussion

Table 2 shows the 313 participants come from five different faculties. The number of respondents from FKEKK (Electronics and Computer Engineering) is 53 (16.9%), FKP (Manufacturing) 74 (23.6%), FTKEE (Electronics and Electrical Technology) is 113 (36.1%), FTKMP (Manufacturing Technology) is 62 (19.8%) and FTMK (Information and Communication Technology) is 11 (3.5%). Table 3 indicates that 226 (72.2%) out of 313 participants were male students while 87 (27.8%) were females.

Table 2

Demographic Profile of Participants

Faculty	Frequency (f)	Percent
FKEKK	53	16.9 %
FKP	74	23.6 %
FTKEE	113	36.1 %
FTKMP	62	19.8 %
FTMK	11	3.5 %
TOTAL	313	100 %

Table 3

Number and Percentage of Undergraduates Based on Gender

	Frequency (f)	Percent
MALE	226	72.2
FEMALE	87	27.8
TOTAL	313	100.0

4.1 Level of Speaking Anxiety of TVET Learners

Determining the learners' anxiety levels can help answer the following research question.

Research Q1: To what extent do TVET undergraduates suffer from speaking anxiety?

Table 4

Participants' Level of PRPSA

Level	N	Mean
High	19	144.79
Moderate	248	113.94
Low	46	88.37

The table above denotes the mean score distribution. The findings reveal that 248 participants, or 79.23% of the sample, have moderate anxiety when speaking in front of an audience (M=113.94). A mere 19 individuals (6.07%) experience severe speech anxiety (M=144.79). There are 46 (14.69%) participants who have a low level of speech anxiety (M=88.37). The TVET learners' overall PRPSA mean score is 115.7, indicating a moderate level. According to the statistics, when asked to give a speech in front of an audience, TVET learners at UTaM reported feeling nervous and uneasy.

4.2 Causes of Speaking Anxiety among the TVET Learners

It is pertinent to find the reasons behind TVET students' fear of speaking up as the learners experience some level of anxiety. Therefore, the next research question for this study will identify the factors inducing speech anxiety.

Research Q2: What are the causes of speaking anxiety among TVET undergraduates?

Table 5

Descriptive Analysis of PRPSA Items

No	Item	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1	While preparing for giving a speech, I feel tense and nervous.	4.5%	3.8%	29.7%	37.3%	24.3%
2	I feel tense when I see the words “speech” and “public speech” on a course outline when studying.	5.1%	10.5%	32.9%	34.5%	16.9%
3	My thoughts become confused and jumbled when I am giving a speech.	2.9%	9.3%	33.9%	39%	15%
4	Right after giving a speech I feel that I have had a pleasant experience.	2.6%	1.9%	17.6%	35.8%	42.2%
5	I get anxious when I think about a speech coming up.	3.2%	8%	27.8%	41.9%	19.2%
6	I have no fear of giving a speech.	24.3%	38.7%	21.7%	10.5%	4.8%
7	Although I am nervous just before starting a speech, I soon settle down after starting and feel calm and comfortable.	5.4%	8%	32.9%	33.2%	20.4%
8	I look forward to giving a speech.	7.3%	14.1%	42.8%	25.9%	9.9%
9	When the instructor announces a speaking assignment in class, I can feel myself getting tense.	4.2%	9.6%	39.3%	37.7%	9.3%
10	My hands tremble when I am giving a speech.	7.7%	14.1%	31.6%	32.6%	14.1%
11	I feel relaxed while giving a speech.	12.5%	36.7%	37.7%	8.6%	4.5%
12	I enjoy preparing for a speech.	7.7%	16.9%	43.8%	21.1%	10.5%
13	I am in constant fear of forgetting what I prepared to say.	3.2%	6.7%	28.8%	40.9%	20.4%

No	Item	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
14	I get anxious if someone asks me something about my topic that I don't know.	4.5%	14.1%	28.4%	33.9%	19.2%
15	I face the prospect of giving a speech with confidence.	3.5%	12.1%	56.2%	20.8%	7.3%
16	I feel that I am in complete possession of myself while giving a speech.	3.5%	18.5%	46.3%	24%	7.7%
17	My mind is clear when giving a speech.	8%	27.8%	36.7%	28.5%	8.9%
18	I do not dread giving a speech.	6.7%	24%	48.6%	16.6%	4.2%
19	I perspire just before starting a speech.	5.1%	15%	47.9%	24.6%	7.3%
20	My heart beats very fast just as I start a speech.	3.2%	9.6%	24%	42.8%	20.4%
21	I experience considerable anxiety while sitting in the room just before my speech starts.	5.1%	16.3%	31.6%	36.1%	10.9%
22	Certain parts of my body feel very tense and rigid while giving a speech.	5.4%	10.5%	37.1%	37.4%	9.6%
23	Realizing that only a little time remains in a speech makes me very tense and anxious.	2.9%	14.4%	29.4%	38%	15.3%
24	While giving a speech, I know I can control my feelings of tension and stress.	2.2%	12.5%	40.9%	32.6%	11.8%
25	I breathe faster just before starting a speech.	4.2%	16.9%	39.6%	30%	9.3%
26	I feel comfortable and relaxed in the hour or so just before giving a speech.	7.3%	27.5%	36.4%	21.4%	7.3%
27	I do poorer on speeches because I am anxious.	4.2%	19.8%	35.8%	23.3%	16.9%
28	I feel anxious when the teacher announces the date of a speaking assignment.	10.5%	17.3%	40.9%	23%	8.3%
29	When I make a mistake while giving a speech, I find it hard to concentrate on the parts that follow.	3.5%	10.2%	29.1%	34.5%	22.7%
30	During an important speech I experience a feeling of helplessness building up inside me.	4.2%	22.7%	35.1%	26.8%	11.2%

No	Item	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
31	I have trouble falling asleep the night before a speech.	21.1%	25.6%	26.5%	16.6%	10.2%
32	My heart beats very fast while I present a speech.	5.8%	15.3%	27.2%	34.8%	16.9%
33	I feel anxious while waiting to give my speech.	3.8%	10.9%	24.9%	40.9%	19.5%
34	While giving a speech, I get so nervous I forget facts I really know.	3.8%	15%	30.4%	32.9%	17.9%

Table 5 denotes the causes of speech anxiety among the TVET learners at UTm. It is very evident that the learners experienced jitters when speaking in public when 63% of the respondents disagreed with the statement suggesting that learners do not fear giving a speech. 61.6% of the respondents further acknowledged that they experienced tense and nervousness. Also 61.1% did not conceal the fact that they felt anxious when they thought about an upcoming speech, which was an indication that the learners were not comfortable with the idea of speaking in public. Similar sentiments were seen when 61.3% of the respondents admitted to having constant fears of not being able to recall what they have prepared earlier. Another proof of anxiety is when 50.8% of the respondents divulged that they forgot facts that they really knew while giving a speech. These findings correspond to what was discovered by Soomro et al. (2019) in their study where more than 70% of their research participants who were engineering undergraduates claimed that stress and nervousness was the main obstacle that affected their speaking performance in oral presentations and this caused the students to be unable to recall points despite having made full preparations for the presentation. Sholiki (2022) stressed that communication apprehension or fear of speaking is one of the causes why students suffer from speech anxiety. Further confirmation came from Aulia et al. (2023) who posited that communication apprehension significantly influences speech anxiety among students especially in public settings.

Speech anxiety is again proven to exist among the learners when 63.2% of the respondents disclosed that their hearts beat very fast as they started speaking. A glaring point to note is that the TVET learners were not as calm and composed as they should have been as 60.4% of the respondents admitted to experiencing anxiety while waiting to start their speech. This feeling of anxiousness caused them problems as 54% conceded that they were confused and could not think clearly when they were speaking. Kadir and Raof (2021) had similar observations in their study involving 125 Engineering undergraduates. During their interview with high anxiety level participants, the researchers reported that 10 out of 15 students declared they lost concentration of what they wanted to say, causing jumbled and disorganized ideas during oral presentation.

Another sign of uneasiness towards public speaking is shown when 51.4% of the respondents confessed of getting apprehensive when they spot the words “speech” and “public speech” in a lesson plan. 53.3% of the respondents agreed being in a state of anxiety when realizing time was tight when giving a speech. Similar displays of apprehension are discovered with 53.1% of the respondents admitting to feeling anxious when not knowing how to answer questions pertaining to their topic. Making mistakes while giving a speech is also another cause for anxiety for 57.2% of the respondents. These findings show that the TVET learners’ anxiety could also stem from their so-called thoughts of being negatively evaluated by others. Being self-conscious and fear of not being able to answer questions aggravate their feelings of anxiousness. Other studies have also identified students’ fear of making mistakes as a source that contributes to speaking anxiety (Maya et al., 2024; Achmad et al., 2024).

4.3 Differences between Male and Female TVET Learners in Their Speaking Anxiety Levels

The following research question can be answered by examining the differences in speech anxiety levels between male and female TVET learners.

Research Q3: Is there a difference in the level of speaking anxiety between male and female TVET undergraduates?

Table 6

Difference between Male and Female Participants' Speaking Anxiety Mean Score

Gender	N	Mean	Std Deviation	Std Error Mean
Male	226	111.58	15.996	1.064
Female	87	113.30	14.309	1.534

Table 7

Difference between Male and Female Participants' Speaking Anxiety Level

		Levene's Test for Equality of Variances		t-test for Equality of Means						
Score		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
	Equal variances assumed	1.021	.313	-.876	311	.381	-1.719	1.962	-5.579	2.141
	Equal variances not assumed			-.921	173.320	.358	-1.719	1.867	-5.404	1.966

Descriptive statistics in Table 6 indicate that male learners had a speaking anxiety mean score of 111.58 (SD = 15.996), while females had a slightly higher mean of 113.30 (SD = 14.309). This suggests that, on average, female learners experienced slightly higher levels of speaking anxiety compared to their male counterparts. Same findings were reported by Tran et al. (2021) and Perveen et al. (2018) where female undergraduates had higher speaking anxiety level compared to the males. Loureiro et al. (2020) in their study involving 345 undergraduates discovered that female students showed more significant levels of anxiety in oral and written communication than male students. However, Shaquille (2017) in his study examining public speaking anxiety among 332 college students found that male students experienced higher anxiety level compared to the females.

The research aimed to determine if there was a significant difference in speaking anxiety levels between male and female TVET undergraduates. A t-test for equality of means was conducted to compare the scores of 226 male and 87 female learners. Before interpreting the results of the t-test, Levene's test for equality of variances was conducted to assess the assumption of homogeneity of variances. Table 7 shows the F-statistics from Levene's test was 1.021 with a significance level of 0.313, indicating that the assumption of equal variances was met, as the p-value was greater than 0.05. Therefore, the t-test assuming equal variances was appropriate for interpreting the results.

The results of the t-test [$t(311) = -0.876$, $p = 0.381$] indicate that there was no statistically significant difference between the mean scores for speaking anxiety levels of male and female learners. The mean difference was -1.719 with a 95% confidence interval ranging from -5.579 to 2.141, further confirming that the difference in speaking anxiety levels between males and females was not significant. Even when equal variances were not assumed, the t-test [$t(173.32) = -0.921$, $p = 0.358$] showed similar results with a mean difference of -1.719 and a 95% confidence interval between -5.404 and 1.966.

The findings suggest that male and female TVET learners do not differ significantly in their levels of speaking anxiety. This result is important as it challenges some common assumptions that female students may inherently experience higher anxiety in public speaking situations than males. While females had a slightly higher mean score than males, the difference was not large enough to be statistically significant, meaning that both genders are likely to experience similar levels of anxiety in speaking contexts within this educational setting. This finding aligns with previous studies by Tran et al. (2021) and Dellah (2020) who reported that there was no significant difference in the level of public speaking anxiety between male and females. Concepcion et al. (2023) in their study involving science undergraduates also claimed there are no statistically significant disparities in the level of speaking anxiety among the males and females.

5. Conclusion

According to McGunagle & Zizka (2020), the critical factors that decide the success or failure of graduate employability are those soft skills known as "the 21st-century skills". Yong and Ling (2023) posit that employers seek soft skills on top of the relevant technical knowledge and skills. The present study has revealed that to a certain extent, UTeM TVET undergraduates experience some degree of speech anxiety, albeit at a moderate level. This is a cause for concern as this problem affects the learners' ability to communicate effectively. Communication competence has been touted to be in demand in any workplace (Vanitha & Jaganathan, 2019). Rai and Likhitar (2023) claimed that employers and hiring managers look for graduates possessing employability skills and that communication skills are crucial to secure employment in the corporate sector.

Echoing similar views much earlier, Chan and Selvam (2016) emphasized in their study that engineering programmes need to ensure that their graduates have strong communication skills. They also argued that while universities place a high value on students' understanding of science and technology concepts, not enough concern is given to the development of employability skills for graduates. With all the findings and arguments favouring communication ability and its importance to graduate employability, it is essential for TVET undergraduates intending to compete in the global market to equip themselves with communication skills in order to have an edge in employability. Towards this end, it is to the advantage of the TVET learners to master public speaking skills, which can undoubtedly enhance their self-confidence and alleviate their speech anxiety.

TVET curriculum planners could include aspects of public speaking in their technical syllabi and learning institutions could make public speaking courses compulsory to be taken by their students before they graduate in their studies. This will somehow ensure that TVET learners are able to speak their thoughts and views effectively when they are called for job interviews. Our TVET-educated workforce should be ready to face the challenges brought about by IR 4.0 and the ability to speak effectively definitely responds to the requirements of the IR 4.0.

6. Co-Author Contribution

Authors 1 and 2 are responsible for conceptualization of research and literature review, Author 3 assisted in data collection and analysis while Author 4 is responsible for formatting of the paper and overall review-editing.

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